

## ABSTRACT

A starter motor for an internal combustion engine having an integral one-way roller clutch and epicycle gear train unit is provided. The integrated unit includes an integrated gear support/clutch barrel which, on one side, houses the roller and spring elements of the clutch and, on the other side, supports the planetary gears of the epicycle gear assembly. The invention is of simple construction and provides reduced overall starter motor dimension while demonstrating improved noise, vibration and harshness characteristics.